

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference P400319WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 03/05036	International filing date (day/month/year) 18/11/2003	(Earliest) Priority Date (day/month/year) 23/11/2002
Applicant UNIVERSITY OF DURHAM		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1a _____

☐ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 F16L55/34 F16L 38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/23213 A (STUTCHBURY NEIL WILLIAM ;UNIV DURHAM (GB); APPLETON ERNEST (GB)) 5 April 2001 (2001-04-05) cited in the application abstract; figure 1	1,2,5-11
A	FR 2 355 236 A (ROULAND DANIEL) 13 January 1978 (1978-01-13) page 2, line 6 - page 5, line 29; figures 1-6	1-6
A	US 6 415 722 B1 (REIS NEY ROBINSON SALVI DOS) 9 July 2002 (2002-07-09) column 9, line 44 - column 10, line 19; figures 1-3E	1,3-6
	----- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

25 February 2004

Date of mailing of the international search report

02/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Popescu, A

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/05036

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 86/01751 A (STORESUND PER) 27 March 1986 (1986-03-27) abstract; figure 1 -----	1
A	DE 200 00 804 U (EDER GERHARD) 7 June 2001 (2001-06-07) abstract; figures 1-6 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/05036

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0123213	A	05-04-2001	GB 2356439 A	23-05-2001
			AU 7533200 A	30-04-2001
			EP 1216379 A2	26-06-2002
			WO 0123213 A2	05-04-2001
			JP 2003510212 T	18-03-2003
			NO 20021020 A	23-05-2002
<hr/>				
FR 2355236	A	13-01-1978	DE 2756561 A1	21-06-1979
			NL 7713900 A	19-06-1979
			FR 2355236 A1	13-01-1978
			BE 861851 A1	31-03-1978
<hr/>				
US 6415722	B1	09-07-2002	BR 9904364 A	05-06-2001
			AU 740258 B2	01-11-2001
			AU 6130400 A	12-04-2001
			NO 20004853 A	29-03-2001
<hr/>				
WO 8601751	A	27-03-1986	NO 843686 A	18-03-1986
			AU 4809385 A	08-04-1986
			EP 0195797 A1	01-10-1986
			NO 861935 A ,B,	15-05-1986
			WO 8601751 A1	27-03-1986
<hr/>				
DE 20000804	U	07-06-2001	DE 20000804 U1	07-06-2001
<hr/>				